Lab Assignment

Cybersecurity Professional Program

Introduction to Python
for Security

Data Types & Conditions

PY-02-L6
Data Structure

Lab Objective

Understand how to work with data structures and their content.

Lab Mission

Extract data from lists, dictionaries, and tuples.

Lab Duration

10-15 minutes

Requirements

- Knowledge of how dictionaries and lists operate.
- Working knowledge of the print function.

Resources

- Environment & Tools
    - Windows, Linux, MacOS
        - Python 3
        - PyCharm

Textbook References

- Chapter 2: Data Types & Conditions
    - Section 4: Advanced Data Structure

Lab Task

Use the following data structure that contains a dictionary and a list, to practice value extraction.

structure = [{'Arizona': 'Phoenix', 'California': 'Sacramento', 'Hawaii': 'Honolulu'},5000,6000,7000,['hat', 't-shirt', 'jeans']]

1. Copy the provided variable to the IDE.

```
structure = [{'Arizona': 'Phoenix', 'California': 'Sacramento', 'Hawaii': 'Honolulu'},
             5000,6000,7000,['hat', 't-shirt', 'jeans']]
```

2. Print “5000” by extracting it from the variable.

```
print(structure[1])
```

3. Print the dictionary of states and cities from the variable. For example: {'Arizona': 'Phoenix', 'California': 'Sacramento', 'Hawaii': 'Honolulu'}

```
print(structure[0])
```

4. Print the list of clothes from the variable. For example: ['hat', 't-shirt', 'jeans']

```
print(structure[4])
```

5. Print the word “Phoenix” from the variable.

```
print(structure[0]['Arizona'])
```

6. Print the word “jeans” from the variable.

```
print(structure[4][2])
```

7. Delete the value “7000” using the del() function.

```
del(structure[3])
```

8 Print the data structure after the deletion change.

```
print(structure)
```

9 Append “new value” to the list, using the append() function.

```
structure.append("new value")
```

10 Print the data structure after the update.

```
print(structure)
```